

## EFFICIENT COMPOUND DISTRIBUTION IN MICROFLUIDIC DEVICES

## **ABSTRACT OF THE DISCLOSURE**

Microfluidic devices are provided having units of 8-fold symmetry comprising 8 assay units, where a reservoir provides a common component to 8 assay units. The units can be compactly formed in a substrate to provide the ability to perform a large number of assays within a small area. The microfluidic devices find use in operations, such as assays, DNA sequence detection, etc. Various formats can be used to have the microfluidic device interrelate with microtiter well plates. Methods are provided for monitoring the flow rates/velocities of assay components and streams for comparison of results in different assay units and/or to modify the conditions to change the flow rates in particular channels.